

AMENDMENTS TO THE CLAIMS

Please amend claims 1-5, 7, and 20-26 as follows.

Please cancel claim 6.

1. (Currently amended) ~~An apparatus~~ A die, comprising:

 ~~a first end of a via disposed in a semiconductor support layer, the first end having a first diameter; and~~

 ~~a second end of the via having a second diameter, the first diameter greater than the second diameter~~

 a dielectric layer positioned on top of a semiconductor support layer;

 a via passing through the dielectric layer and the semiconductor support layer,

 wherein a first end of the via is positioned in the dielectric layer and a second end of the via is positioned in the semiconductor support layer, wherein a first diameter of the first end is greater than a second diameter of the second end; and

 a contact positioned on top of the dielectric layer, the contact coupled to the first end of the via, wherein the contact to be coupled to a device of the die.

2. (Currently amended) The ~~apparatus~~ die of claim 1 wherein the second end of the via includes a shaft ~~between the first end and the second end~~, the shaft having including a shaft diameter similar to the second diameter.

3. (Currently amended) ~~The apparatus of claim 1 wherein the first end forms a semi-cone in the semiconductor support layer.~~ The die of claim 2 wherein the shaft tapers outward from a center of the via within the semiconductor support layer towards the dielectric layer to form a semi-cone shape in the semiconductor support layer, wherein the semi-cone shape forms an increased via contact area at the first end for coupling the via to the contact.
4. (Currently amended) ~~The apparatus of claim 1, further comprising a dielectric layer disposed proximate to the semiconductor support layer, the via to pass through the dielectric layer.~~ The die of claim 3 wherein the via continues to taper outwards from the second end into the first end to form a semi-cone shape in the dielectric layer.
5. (Currently amended) ~~The apparatus of claim 4 wherein a diameter of the via in the dielectric layer is similar to the first diameter.~~ The die of claim 3 wherein a diameter of the first end is similar to a diameter of the semi-cone shape, the first end to form a cylinder shape in the dielectric layer.
6. (Cancelled)
7. (Currently amended) ~~The apparatus~~ die of claim 1 wherein the via includes a metal-filled via.

Claims 8-19 (Cancelled).

20. (Currently Amended) A die package, comprising:

~~a semiconductor support layer including a via having a first end and a second end in the semiconductor support layer, wherein a diameter of the first end is greater than a diameter of the second end;~~

~~a dielectric layer disposed proximate to the semiconductor support layer, wherein the via passes through the dielectric layer; and~~

~~a contact disposed on the dielectric layer, the via coupled to the contact;~~

~~a semiconductor support layer;~~

~~a dielectric layer disposed on the semiconductor support layer;~~

~~a via including a first end and a second end, the first end positioned in the dielectric layer and the second end positioned in the semiconductor support layer, wherein a diameter of the first end is greater than a diameter of the second end;~~

~~a first contact, disposed on the dielectric layer, coupled to the first end of the via, wherein the first contact coupled to a device of a die of the die package; and~~

~~a second contact, disposed on the semiconductor support layer, coupled to the second end of the via, wherein the second contact to be mounted to a printed circuit board.~~

21. (Currently amended) ~~The die package of claim 20 wherein the via includes a shaft between the first end and the second end, a diameter of the shaft similar to the diameter of the second end. The die package of claim 20 wherein the second end includes a shaft and an enlarged end, the enlarged end between the shaft and the first end,~~

wherein the enlarged end tapers outward from a center of the via within the semiconductor support layer towards the dielectric layer, the enlarged end defining a semi-cone shape,

wherein the enlarged end creates an increased via contact area at the first end for coupling the via to the first contact.

22. (Currently amended) ~~The die package of claim 20 wherein the first end is a semi-cone shape centered on the via~~ The die package of claim 21 wherein the first end continues to taper outwards from the enlarged end to form a semi-cone shape in the dielectric layer.

23. (Currently amended) The die package of claim ~~22~~ 21 wherein a diameter of the first end of the via through the dielectric layer is similar to a diameter of the semi-cone shape, the first end to form a cylinder shape in the dielectric layer.

24. (Currently Amended) A system, comprising:

a printed circuit board (PCB); and

a processor coupled to the PCB, wherein the processor includes:

~~a semiconductor support layer including a via having a first end and a second end in the semiconductor support layer, wherein the first end having a first diameter and the second end having a second diameter, the first diameter greater than the second diameter;~~

~~a dielectric layer disposed proximate to the semiconductor support layer wherein the via passes through the dielectric layer; and~~

~~a contact disposed on the dielectric layer, the via coupled to the contact.~~

a dielectric layer positioned on top of a semiconductor support layer;
a via passing through the dielectric layer and the semiconductor support layer, wherein a first end of the via is positioned in the dielectric layer and a second end of the via is positioned in the semiconductor support layer, wherein a first diameter of the first end is greater than a second diameter of the second end; and
a first contact positioned on top of the dielectric layer, the first contact coupled to the first end of the via, wherein the first contact is coupled to a device of the processor,
wherein the second end of the via is coupled to the PCB via a second contact.

25. (Currently amended) The system of claim 24 wherein the ~~via~~ second end includes a shaft ~~between the first end and the second end~~, the shaft ~~having~~ including a shaft diameter similar to the second diameter.

26. (Currently amended) The system of claim 25 wherein the ~~first~~ second end tapers outward from a center of the via within the semiconductor support layer towards the dielectric layer, the ~~first~~ second end defining a semi-cone shape in the semiconductor support layer.

27. (Original) The system of claim 24 wherein the first diameter is approximately twice the second diameter.